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COST-UTILITY ANALYSIS OF THE TREATMENT OF RELAPSING-REMITTING MULTIPLE SCLEROSIS WITH GLATIRAMER ACETATE OR INTERFERON BETA IN SPAIN

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OBJECTIVE: To carry out a cost-utility analysis of the treatment of relapsing-remitting multiple sclerosis (RRMS) with glatiramer acetate (Copaxone) or interferon beta products (all as a whole, Avonex, Rebif and Betaferon). **METHODS:** Markov pharmacoeconomic model that compared treatments by simulating the life of a hypothetical cohort of 30-year-old women, from the societal perspective. Transition probabilities, utilities, resource utilization and costs (direct and indirect) were estimated from Spanish sources and bibliography. Simple univariate sensitivity analyses of the base case were performed. **RESULTS:** In the base case analysis, the average cost per patient (€ in 2001) of life treatment, considering a life expectancy of 53 years, would be €1,243,906 €1,818,149, €1,763,263, €1,987,153 and €1,704,031 with Copaxone, all the interferons, Avonex, Rebif and Betaferon, respectively. Thus, the savings with Copaxone would range from €460,000 to €737,000 approximately. The quality-adjusted life years (QALY) obtained with Copaxone or the interferons would be 10.977 and 6.917, respectively, with a mean gain of 4.060 QALY/patient with Copaxone. Sensitivity analyses confirmed the robustness of the base case. Interferons would be superior to Copaxone only in the hypothetical and unlikely case that they delay the progression of the illness by 20% more than that presently observed in the clinical trials. **CONCLUSIONS:** For a typical patient with RRMS, treatment with Copaxone would be more efficient than interferons, which would be dominated by the former (Copaxone would be more effective with lower costs than the latter).

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THE COMPARISON OF DIFFERENT METHODS FOR DETERMINING THE IMPACT OF MIGRAINE PROPHYLAXIS ON COSTS

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OBJECTIVES: Compare different approaches to assessing the association of prophylactic treatment and total migraine-specific costs from administrative data. Evaluate the usefulness of propensity scores. **METHODS:** Using retrospective, administrative data, two groups of patients were identified: 1) received prophylactic migraine treatment; and 2) potential candidates for prophylaxis. Four methods were applied to compare the log of the total migraine cost between the groups, and to determine the association of prophylaxis with total cost. In the first method, groups were matched based on logit propensity score to adjust for selection bias. In the second, groups were exact case matched on the same variables. In the third method a linear regression model was constructed using all observations in the data. A comparison between the means of total migraine cost, and log of total migraine cost was also evaluated based on a T-test without adjustment for selection bias. Jackknife residual analysis was performed, and statistically significant outliers were eliminated. **RESULTS:** As typical for cost data, the total migraine cost data was skewed, so the data was log transformed. Results based on different methods showed the same trend; patients treated with migraine prophylaxis had lower total migraine cost. Mean differences (p-value) in total migraine cost and log cost, between the groups, without adjustment for selection bias, were $263 (0.0306) and 0.3192 (<0.0001). Log total migraine cost showed a 29% (<0.0001) (linear regression), 33.5% (<0.0001) (propensity scores method), and 29.6% (<0.0001) (case matched method) reduction in cost for those on prophylaxis. **CONCLUSION:** The construction of a propensity score model is more complicated and may result in some data loss. The ability of the model to adjust for selection bias depends on how well the propensity score model predicts the treatment variable. The constraints in this retrospective, administrative data limit the usefulness of this approach.

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THE ECONOMIC BURDEN OF MIGRAINE AND COMORBID MENTAL CONDITIONS: RESULTS FROM A CASE-CONTROL STUDY

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OBJECTIVES: To examine the direct and indirect costs for adults diagnosed with migraine, as well as the costs associated with comorbid anxiety and/or depression. **METHODS:** Individuals diagnosed with migraine or receiving a migraine medication between 1999–2000 were identified in a database capturing inpatient, outpatient, and prescription drug services from approximately 45 large employers. The migraine cohort (N = 2519) was matched to a non-migraine cohort (N = 2519) at a 1:1 ratio based upon age, gender and metropolitan statistical area. Variables of interest included direct medical costs (inpatient, outpatient, and prescription drug) as well as indirect costs (absenteeism, short-term disability and worker compensation). **RESULTS:** Adults with migraine had significantly higher inpatient ($p = 0.0008$), outpatient ($p < 0.0001$), prescription drug ($p < 0.0001$), and overall medical costs ($p < 0.0001$) compared to the non-migraine cohort. In addition, adults with migraine had significantly higher costs associated with absenteeism ($p = 0.0010$) compared to the healthy cohort. The presence of depres-